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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,908	04/25/2001	Bruce L. Bruso	147363/9079-6US	7563

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EXAMINER
MITCHELL, KATHERINE W

ART UNIT	PAPER NUMBER
3677	

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/841,908	BRUCE L. BRUSO
	Examiner	Art Unit
	Katherine W Mitchell	3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *11 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-8 and 10-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-8 and 10-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on *n/a* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manchak Jr '194 in view of Manchak Jr. US Patent 4844807, hereafter called Manchak Jr ' 807.

Re claims 3-5: Examiner notes that applicant teaches that step (c) of claim 3 is optional and may not be required; however, examiner is addressing it in an effort to speed prosecution of the case. Manchak Jr. '194 teaches a method of soil remediation to measure and reduce the level of contaminants in soil, comprising churning or comminuting the contaminated soil in situ with a soil mixing device (10,64), injecting hot air into the contaminated soil as it is being churned to thermally strip off organic compounds, and introducing a chemical agent, such as potassium permanganate, into the soil to continue reducing the contaminant level, in col 3 lines 12-55, col 4 lines 8-63, col 6 lines 5-12, and col 8 lines 8-55. While examiner believes that Manchak Jr. '194 does teach that the contaminants are organic and that hot air is injected until thermal stripping is no longer effective in reducing contaminants, examiner is presenting an alternative argument to speed prosecution in case it is interpreted that the element is not inherently taught. Manchak Jr. '807 specifically teaches using a soil remediation

method comprising soil comminutation, hot vapor injection, and chemical oxidant, such as permanganate, injection, for volatile organic contaminants in the abstract, col 2 lines 45-66, and col 9 lines 4-34. Manchak '807 teaches in col 3 lines 38-61 teach that hot fluid, which can include air, is used to volatilize organics, and is used until the "zone is detoxified to a desired degree", and that chemical oxidizers are used only for toxics not volatile at the temperature of the stripping fluid being used. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Manchak Jr; '194 to include using the remediation method specifically on organic contaminants in soil, and to use fluid extraction until no longer practically effective, in view of Manchak Jr '807, in order to specifically ensure that contaminants requiring oxidizing agents and air, such as organics, would be treated with the method to obtain a large application and customer base and to use maximize the use of baseline treatments prior to employing secondary treatments requiring additional materials and labor.

Examiner notes that Manchak Jr. '194 emphasizes in col 6 lines 5-12 that the method primarily deals with analyzing contaminants, but can also be used to treat contaminants so found, using any combination of steps of injecting additional hot air for stripping volatile contaminants, injection of treatment chemicals, etc. The cutting tool meets the broad definition of a trenching tool. Since the method includes contaminant analysis and contaminant treatment, it is inherent that there would be a target contaminant level, and that treatment would be done until the target level is obtained. Manchak, Jr. '194 claims 15 and 16 disclose that chemical oxidants, such as

permanganate, are injected into the soil to neutralized unremoved {emphasis by examiner} contaminants, thus inherently teaching that the chemical treatment is done if needed after the air stripping. Air stripping is disclosed as the initial treatment step, and the difference in cost of permanganate versus air and the possibly undesirable by-products of large amounts of permanganate would explain the implied teaching that the air stripping is used until it is no longer practically effective, and then the permanganate would be used to complete the remediation. Examiner also notes that claim 13 and col 6 lines 5-12 disclose the option of multiple hot air injections, thus the hot air injection comprises a ground heater system for both preheating the soil and hot air injection for soil stripping.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manchak Jr '194 in view of Manchak Jr '807 as applied above, and further in view of Vinegar et al. US Patent 5190405. As discussed above, Manchak Jr '194 in view of Manchak Jr '807 as applied above teach all the elements except that a thermal insulation is laid over the soil after introducing the chemical oxidizing agent. It is a well-known principle of reaction kinetics and thermodynamics that oxidation reactions require energy ($\Delta H_{reaction}$), and that reaction rates increase as temperature increases; in fact, kinetic rate equations are generally written k(t), to show that they depend on temperature. Vinegar et al. teaches that insulating blankets can be used over soil remediation wells to retain heat in the soil in the abstract. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Manchak Jr; '194 in view of Manchak Jr '807 as applied above to include covering the remediation site with

an insulating cover prior to oxidation, as taught by basic scientific principles and Vinegar et al., in order to increase both the reaction rate and the reaction yield of the contaminant/oxidation agent reaction.

4. Claims 7-8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manchak Jr '194 in view of Manchak Jr '807 as applied above, and further in view of Bruso, US Patent 5830752.

Re claims 7-8: Examiner notes that applicant teaches that step (c) of claim 7 is optional and may not be required; however, examiner is addressing it in an effort to speed prosecution of the case. Manchak Jr. '194 teaches a method of soil remediation to measure and reduce the level of contaminants in soil, comprising churning or comminuting the contaminated soil in situ with a soil mixing device (10,64), injecting hot air into the contaminated soil as it is being churned to thermally strip off organic compounds, and introducing a chemical agent, such as potassium permanganate, into the soil to continue reducing the contaminant level, in col 3 lines 12-55, col 4 lines 8-63, col 6 lines 5-12, and col 8 lines 8-55. While examiner believes that Manchak Jr. '194 does teach that the contaminants are organic and that hot air is injected until thermal stripping is no longer effective in reducing contaminants, examiner is presenting an alternative argument to speed prosecution in case it is interpreted that the element is not inherently taught. Manchak Jr. '807 specifically teaches using a soil remediation method comprising soil comminutation, hot vapor injection, and chemical oxidant, such as permanganate, injection, for volatile organic contaminants in the abstract, col 2 lines 45-66, and col 9 lines 4-34. Manchak '807 teaches in col 3 lines 38-61 teach that hot

fluid, which can include air, is used to volatilize organics, and is used until the "zone is detoxified to a desired degree", and that chemical oxidizers are used only for toxics not volatile at the temperature of the stripping fluid being used. However, neither Manchak '807 or '194 specifies that the soil mixing device is a trencher. Bruso teaches a method for in situ soil remediation using a trencher to comminute the soil in the abstract and Fig. 3. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Manchak Jr '194 in view of Manchak Jr '807 as applied above to include using comminuting tools such as a trencher, as taught by Bruso, in order to remediate soil in a continuous, cost-effective and relatively rapid manner and to use a tool known to effectively comminute the soil and reduce its density to facilitate volatile stripping methods, and to include using the remediation method specifically on organic contaminants in soil and to use fluid extraction until no longer practically effective, in view of Manchak Jr '807, in order to specifically ensure that contaminants requiring oxidizing agents and air, such as organics, would be treated with the method to obtain a large application and customer base and to use maximize the use of baseline treatments prior to employing secondary treatments requiring additional materials and labor.

Examiner notes that Manchak Jr. '194 emphasizes in col 6 lines 5-12 that the method primarily deals with analyzing contaminants, but can also be used to treat contaminants so found, using any combination of steps of injecting additional hot air for stripping volatile contaminants, injection of treatment chemicals, etc. The cutting tool meets the broad definition of a trenching tool. Since the method includes contaminant

analysis and contaminant treatment, it is inherent that there would be a target contaminant level, and that treatment would be done until the target level is obtained. Manchak, Jr. '194 claims 15 and 16 disclose that chemical oxidants, such as permanganate, are injected into the soil to neutralized unremoved {emphasis by examiner} contaminants, thus inherently teaching that the chemical treatment is done if needed after the air stripping. Air stripping is disclosed as the initial treatment step, and the difference in cost of permanganate versus air and the possibly undesirable by-products of large amounts of permanganate would explain the implied teaching that the air stripping is used until it is no longer practically effective, and then the permanganate would be used to complete the remediation. Examiner also notes that claim 13 and col 6 lines 5-12 disclose the option of multiple hot air injections, thus the hot air injection comprises a ground heater system for both preheating the soil and hot air injection for soil stripping.

Re claims 10-11: Examiner notes that Manchak Jr. '194 emphasizes in col 6 lines 5-12 that the method primarily deals with analyzing contaminants, but can also be used to treat contaminants so found, using any combination of steps of injecting additional hot air for stripping volatile contaminants, injection of treatment chemicals, etc. Since the method includes contaminant analysis and contaminant treatment, it is inherent that there would be a target contaminant level, and that treatment would be done until the target level is obtained. Manchak, Jr. '194 claims 15 and 16 disclose that chemical oxidants, such as permanganate, are injected into the soil to neutralized unremoved {emphasis by examiner} contaminants, thus inherently teaching that the

chemical treatment is done if needed after the air stripping. Air stripping is disclosed as the initial treatment step, and the difference in cost of permanganate versus air and the possibly undesirable by-products of large amounts of permanganate would explain the implied teaching that the air stripping is used until it is no longer practically effective, and then the permanganate would be used to complete the remediation. Examiner also notes that claim 13 and col 6 lines 5-12 disclose the option of multiple hot air injections, thus the hot air injection comprises a ground heater system for both preheating the soil and hot air injection for soil stripping.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Manchak Jr '194 in view of Manchak Jr '807, and Bruso, US Patent 5830752, and further in view of Vinegar et al. US Patent 5190405. As discussed above, Manchak Jr '194 in view of Manchak Jr '807, and Bruso as applied above, teach all the elements except that a thermal insulation is laid over the soil after introducing the chemical oxidizing agent. It is a well-known principle of reaction kinetics and thermodynamics that combustion or oxidation reactions require energy ($\Delta H_{reaction}$), and that reaction rates increase as temperature increases; in fact, kinetic rate equations are generally written k(t), to show that they depend on temperature. Vinegar et al. teaches that insulating blankets can be used over soil remediation wells to retain heat in the soil in the abstract. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Manchak Jr; '194 in view of Manchak Jr '807 and Bruso as applied above to include covering the remediation site with an insulating cover prior to oxidation, in view of basic scientific principles and Vinegar et al.,

in order to increase both the reaction rate and the reaction yield of the contaminant/oxidation agent reaction.

6. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manchak Jr '194 in view of Manchak Jr. US Patent 4844807, hereafter called Manchak Jr ' 807.

Re claims 13-14: Manchak Jr. '194 teaches a method of soil remediation to measure and reduce the level of contaminants in soil, comprising churning or comminuting the contaminated soil in situ with a soil mixing device (10,64), injecting hot air into the contaminated soil as it is being churned to thermally strip off organic compounds, and introducing a chemical agent, such as potassium permanganate, into the soil to continue reducing the contaminant level, in col 3 lines 12-55, col 4 lines 8-63, col 6 lines 5-12, and col 8 lines 8-55. While examiner believes that Manchak Jr. '194 does teach that the contaminants are organic and that hot air is injected until thermal stripping is no longer effective in reducing contaminants, examiner is presenting an alternative argument to speed prosecution in case it is interpreted that the element is not inherently taught. Manchak Jr. '807 specifically teaches using a soil remediation method comprising soil comminutation, hot vapor injection, and chemical oxidant, such as permanganate, injection, for volatile organic contaminants in the abstract, col 2 lines 45-66, and col 9 lines 4-34. Manchak '807 teaches in col 3 lines 38-61 teach that hot fluid, which can include air, is used to volatilize organics, and is used until the "zone is detoxified to a desired degree", and that chemical oxidizers are used only for toxics not volatile at the temperature of the stripping fluid being used, thus inherently teaching that

the stripping is used until it is no longer practically effective {i.e., until toxics with higher boiling points that the temperature of the stripping fluid are left}. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Manchak Jr; '194 to include using the remediation method specifically on organic contaminants in soil, and to use fluid stripping until no longer practically effective, in view of Manchak Jr '807, in order to specifically ensure that contaminants requiring oxidizing agents and air, such as organics, would be treated with the method to obtain a large application and customer base and to use maximize the use of baseline treatments prior to employing secondary treatments requiring additional materials and labor.

Examiner notes that Manchak Jr. '194 emphasizes in col 6 lines 5-12 that the method primarily deals with analyzing contaminants, but can also be used to treat contaminants so found, using any combination of steps of injecting additional hot air for stripping volatile contaminants, injection of treatment chemicals, etc. The cutting tool meets the broad definition of a trenching tool. Since the method includes contaminant analysis and contaminant treatment, it is inherent that there would be a target contaminant level, and that treatment would be done until the target level is obtained. Manchak, Jr. '194 claims 15 and 16 disclose that chemical oxidants, such as permanganate, are injected into the soil to neutralized unremoved {emphasis by examiner} contaminants, thus inherently teaching that the chemical treatment is done if needed after the air stripping. Air stripping is disclosed as the initial treatment step, and the difference in cost of permanganate versus air and the possibly undesirable by-

products of large amounts of permanganate would explain the implied teaching that the air stripping is used until it is no longer practically effective, and then the permanganate would be used to complete the remediation. Examiner also notes that claim 13 and col 6 lines 5-12 disclose the option of multiple hot air injections, thus the hot air injection comprises a ground heater system for both preheating the soil and hot air injection for soil stripping.

7. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manchak Jr '194 in view of Manchak Jr ' 807 as applied above and further in view of Bruso US Patent 5830752.

Re claim 15: Manchak Jr '194 in view of Manchak Jr ' 807 as applied above teach all the elements except specific organic volatiles. Bruso teaches in col 5 lines 20-54 that chlorinated phenols and toluene are among the many volatile organics suitable to be remediated with soil hot air stripping and soil churning. Further, examiner notes that these are common soil pollutants and it would be reasonable to expect that they would be included in volatile organic soil contaminants. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Manchak Jr '194 in view of Manchak Jr '807 as applied above to include using the remediation method on organics including toluene and chlorinated phenols, as taught by Bruso, in order to use the method to effectively remediate soil with common industrial contaminants.

Re claim 16: As discussed above, Manchak Jr. '194 teaches a method of soil remediation to measure and reduce the level of contaminants in soil, comprising

churning or comminuting the contaminated soil in situ with a soil mixing device (10,64), injecting hot air into the contaminated soil as it is being churned to thermally strip off organic compounds, and introducing a chemical agent, such as potassium permanganate, into the soil to continue reducing the contaminant level, in col 3 lines 12-55, col 4 lines 8-63, col 6 lines 5-12, and col 8 lines 8-55. Further, Manchak Jr. '807 also specifically teaches using a soil remediation method comprising soil comminutation, hot vapor injection, and chemical oxidant, such as permanganate, injection, for volatile organic contaminants in the abstract, col 2 lines 45-66, and col 9 lines 4-34.

Response to Arguments

Applicant's arguments filed 3-11-2003 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., applicant's method is directed to treating contaminants that can be and are thermally stripped but includes a final step of oxidation) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that the references teach the air injection and permanganate application in exact reverse order of applicant, examiner disagrees.

Manchak '194 clearly teaches in claim 7 agitating the soil and then injecting heated fluid to remove contaminants. Claim 15 adds the step of injecting chemical oxidants to neutralize unremoved contaminants, thus teaching that the oxidation step is after the air injection step. Examiner notes that claims 3-8 and 10-12 do not even positively require a chemical oxidation step, but only require an oxidation step if the hot air stripping does not reduce contaminant levels below an unspecified target level. The fact remains that potassium permanganate is and is known as an oxidant, and hydrocarbon oxidation will occur when it is injected. The primary reference, Manchak '194, clearly refers to potassium permanganate as the oxidant chemical used to neutralize any remaining {after thermal stripping is no longer effective} contaminants:

> *"15. The method of claim 14, further comprising the step of injecting chemical oxidants into said soil in situ to neutralize unremoved contaminants therein.*
>
> *16. The method of claim 15, wherein potasssium permanganate is used as the oxidant chemical."*

The fact that Manchak '807 may teach that permanganate has other properties is irrelevant. Examiner notes that Manchak '807 is not used for the teaching of permanganate treatment.

In response to applicant's argument that the references teach toxic contaminants that must be removed, and applicant contemplates that the permanganate oxidation reduction precipitates primarily manganese dioxide which can remain in the soil, this limitation is also not claimed

In response to applicant's argument that the references do not teach using a trencher, examiner previously cited that Bruso '752 teaches a method for in situ soil remediation using a trencher to comminute the soil in the abstract and Fig. 3.

However, applicant argues that Manchak 194 in view of Manchak 807 never discloses the step of analyzing the contaminant concentration to determine effectiveness. Examiner notes Manchak 194 col lines 21-22, which teach that analysis of contaminant level is a known and anticipated step. Further, Manchak 807 teaches in col 9 lines 1-12 and col 10 lines 28-32 that a sensing unit F is used to identify and quantify the toxic compounds in the {soil}, and clearly teaches that when no more volatiles are detected, {no longer effective} or when the {soil} has been detoxified to the "desired degree", then chemical oxidation with potassium permanganate or other oxidizer is called for. The analysis step is clearly anticipated. The exact level would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, as would using the innocuous and inexpensive air stripping until its effectiveness limit was reached, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Applicant's argument that Manchak 194 does not concern itself with treatment is also not persuasive, as Manchak 194 teaches in col 6 lines 7-12 and col 8 lines 47-55 that treatment is part of the claimed invention.

In response to applicant's argument that Manchak 807 and 194 include additional steps not required by applicant's invention, it must be noted that they disclose the

invention as claimed. The fact that they disclose additional steps not claimed is irrelevant, especially in view of applicant's use of the open term "comprising". Similarly the fact that Manchak 807 (and 194) disclose that biological treatment can be used in conjunction with or instead of chemical treatment does not teach away from chemical treatment – examiner notes that Manchak 194 specifically teaches the same chemical treatment as applicant in col 8 lines 51-55 and by Manchak 807 in col 9 lines 10-12. Similarly, even if it is assumed that Manchak '807 requires further stripping after permanganate treatment, Manchak '194 in view of Manchak '807 disclose the invention as claimed. The fact that they disclose additional steps not claimed is irrelevant.

Applicant's argument that Manchak '194 does not improve upon or contradict Manchak '807 with treatment is also not persuasive, as both Manchak 194 and Manchak 807 teach soil churning, hot fluid injection, and if required, injection of potassium permanganate if the volatiles will not be driven off by the temperature of the hot fluid. Examiner is not stating that either reference is inefficient or impractical in using permanganates to treat hydrocarbons.

8. The Declaration of Inga Carus under 37 CFR 1.132 filed 3/11/2003 is insufficient to overcome the rejection of the pending claims based upon Manchak '194 in view of Manchak '807 as set forth in the last Office action because: The Declarant states only that they "do not know of anyone" previously performing the same process or suggesting a similar process. Declarant notes that "normal injection methods" are not successful, and that lifting and churning the soil while injecting the hot air is important in preparing for permanganate treatment – steps taught by the cited art. Especially note

Fig 8 and col 6 lines 19-44 in Manchak '194 showing that the treated area is completely agitated by the cutters. Examiner believes that the cited art as applied to the claims teaches the same process.

9. If examiner understands correctly, applicant's arguments indicate that the claims could possibly be made allowable by clearly reciting that the air stripping / oxidation treatment steps during agitation apply sequentially to the same contaminant.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W Mitchell whose telephone number is 703-305-6713. The examiner can normally be reached on Tues-Fri 9 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 703-306-4115. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-308-8623 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

ROBERT J. SANDY
PRIMARY EXAMINER

kwm
March 24, 2003